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# NLP25 Series

## Single, dual and triple output

ARTESYN TECHNOLOGIES



- **4.00 x 2.07 x 0.91 inch package**
- **Overvoltage protection and short circuit protection**
- **25W with free air convection cooling**
- **EN55022, EN55011 conducted emissions level B**
- **UL, VDE and CSA safety approvals**

The NLP25 series is a 25W universal input AC/DC power supply on a 4.00 x 2.07 inch card with a profile of less than 1 inch. The availability of four single output and three multiple output models in an extremely small package size make the NLP25 ideal for use in space critical, low power communication applications requiring an off line power solution. The NLP25 provides 25W of output power with free air convection cooling which can peak at 30W for 60 seconds. Standard features include overvoltage and short circuit protection. The series, with full international safety approvals and the CE mark, meets conducted emissions EN55022 level B and complies to EN61000-4-2,-3,-4, -5 and -6 immunity standards. The NLP25 series is designed for use in off line, low power data networking and computer applications with limited space, such as hubs, routers, POS terminals, external disk storage and cable modems. The availability of 5V outputs in single and multiple configurations provides a solution for a myriad of microprocessor applications.

CE (LVD)

2 YEAR WARRANTY

***All specifications are typical at nominal input, full load at 25°C unless otherwise stated***

## SPECIFICATIONS

### OUTPUT SPECIFICATIONS

| | | |
|---|---|---|
| Total regulation (Line and load) | Main output<br>Auxiliary outputs | ±2.0%<br>±5.0% |
| Overshoot/undershoot | At turn-on | 2.0% |
| Transient response | Main output 50% to 100% full load step | ±5.0% max. dev., 1ms recovery to 1.0% |
| Temperature coefficient | | ±0.02%/°C |
| Overvoltage protection | Main output | See table |
| Short circuit protection | | Continuous with autorestart |
| Minimum output current | | See table |

### INPUT SPECIFICATIONS

| | | |
|---|---|---|
| Input voltage range | Universal input | 90 to 264VAC<br>127 to 375VDC |
| Input frequency range | | 47Hz to 440Hz |
| Input current | 90VAC<br>230VAC | 0.75A rms max.<br>0.35A rms max. |
| Safety ground leakage current | 120VAC, 60Hz<br>230VAC, 50Hz | 0.2mA<br>0.4mA |

### EMC CHARACTERISTICS

| | | |
|---|---|---|
| Radiated emissions | EN55022/11, FCC part 15 | Level A |
| Conducted emissions | EN55022/11, FCC part 15 | Level B |
| Electrostatic discharge | EN61000-4-2 | Level 2 |
| Electrical fast transients/bursts | EN61000-4-4 | Level 3 |
| Surge susceptibility | EN61000-4-5 | Level 3 |
| RF field susceptibility | EN61000-4-3 | Level 3 |
| RF conducted disturbance | EN61000-4-6 | Level 3 |

### GENERAL SPECIFICATIONS

| | | |
|---|---|---|
| Hold-up time | 110VAC @ full load | 5ms typ. |
| Efficiency | 110VAC @ full load | 70% typ. |
| Isolation voltage | Input/output<br>Input/chassis | 3000VAC<br>1500VAC |
| Switching frequency | Fixed | 60kHz, ±10kHz |
| Approvals and standards (See Notes 4, 8) | | EN60950, IEC950<br>VDE0805, UL1950<br>CSA C22.2 No. 950 |
| Weight | | 115g (4oz) |
| MTBF | MIL-HDBK-217F | 150,000 hours min. |

### ENVIRONMENTAL SPECIFICATIONS

| | | |
|---|---|---|
| Thermal performance (See Notes 7, 8) | Operating ambient, FL<br>Non-operating<br>0°C to 50°C, ambient, convection cooled<br>Peak | 0°C to +50°C<br>-40°C to +85°C<br>Full load<br>See Note 1 |
| Relative humidity | Non-condensing | 5% to 95% RH |
| Altitude | Operating<br>Non-operating | 10,000 feet max.<br>30,000 feet max. |
| Vibration (See Note 6) | 5Hz to 500Hz | 2.4G rms peak |
| Shock | MIL-STD-810E | 516.4 Part IV |

# NLP25 Series

## Single, dual and triple output



For the most current data and application support visit www.artesyn.com/powergroup/products.htm

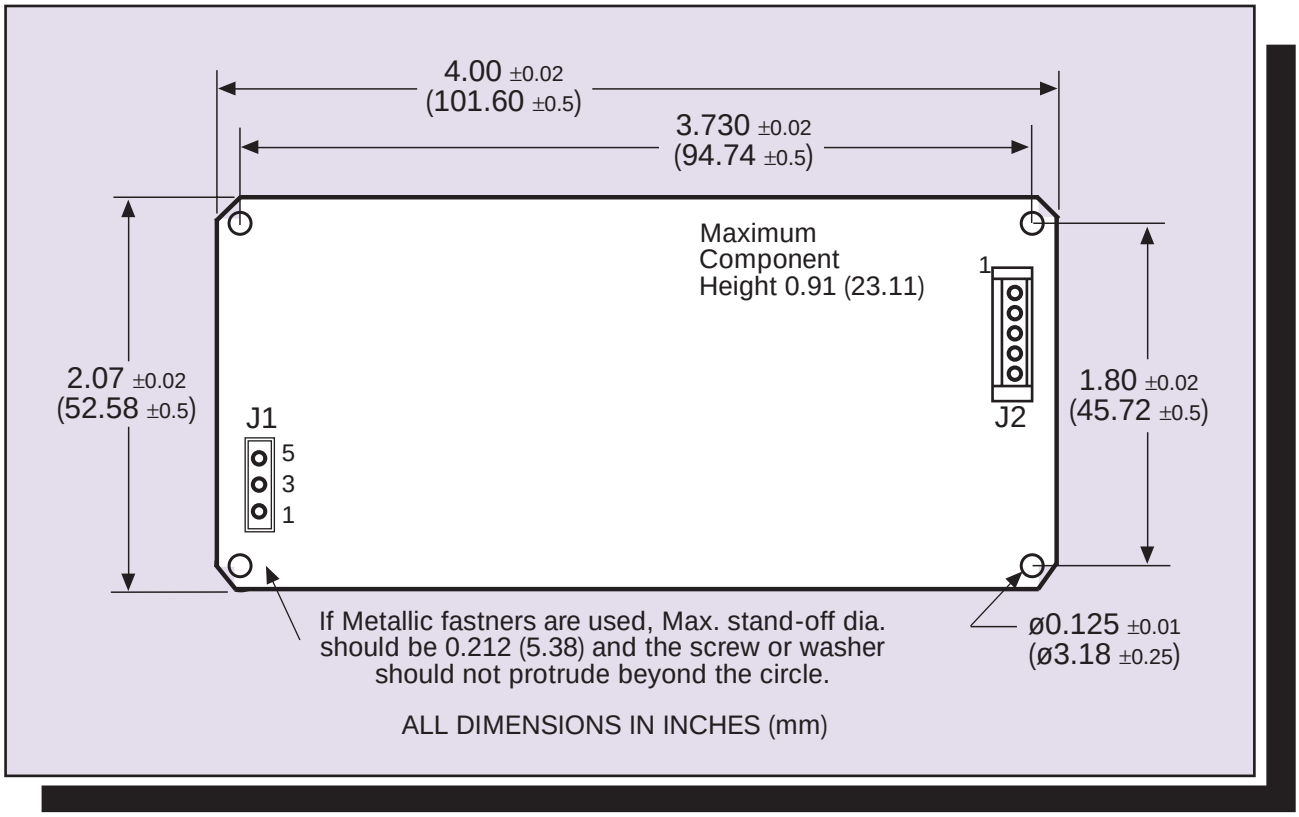
| OUTPUT POWER | OUTPUT VOLTAGE | OUTPUT CURRENT MIN (3) | OUTPUT CURRENT MAX | OUTPUT CURRENT PEAK (1) | RIPPLE (2) | OVP THRESHOLD (5) | TOTAL REGULATION (3) | MODEL NUMBER |
|---|---|---|---|---|---|---|---|---|
| 20.8W | +5V ($I_A$) | 0.2A | 2.0A | 2.5A | 50mV | 5.6V to 6.9V | ±2.0% | NLP25-7608 |
| | +12V ($I_B$) | 0.1A | 0.8A | 1.2A | 120mV | | ±5.0% | |
| | –12V ($I_C$) | 0A | 0.1A | 0.15A | 50mV | | ±5.0% | |
| 20.1W | +5V ($I_A$) | 0.2A | 2.0A | 2.5A | 50mV | 5.6V to 6.9V | ±2.0% | NLP25-7607 |
| | +12V ($I_B$) | 0.1A | 0.8A | 1.2A | 120mV | | ±5.0% | |
| | –5V ($I_C$) | 0A | 0.1A | 0.15A | 50mV | | ±5.0% | |
| 19.6W | +5V ($I_A$) | 0.2A | 2.0A | 2.5A | 50mV | 5.6V to 6.9V | ±2.0% | NLP25-7629 |
| | +12V ($I_B$) | 0.1A | 0.8A | 1.2A | 120mV | | ±5.0% | |
| 25W | +5V | 0A | 5.0A | 6.0A | 50mV | 5.6V to 6.9V | ±2.0% | NLP25-7605 |
| 25W | +12V | 0A | 2.08A | 2.5A | 120mV | 14V to 16.7V | ±2.0% | NLP25-7612 |
| 25W | +24V | 0A | 1.04A | 1.25A | 150mV | 29V to 34.2V | ±2.0% | NLP25-7624 |
| 25W | +48V | 0A | 0.52A | 0.6A | 150mV | 55V to 60V | ±2.0% | NLP25-7617 |

### Notes

1. Peak output current lasting less than 60 seconds with duty cycle less than 5.0%. During peak loading, output voltage may exceed total regulation limits.
2. 20MHz bandwidth, peak to peak, measured differentially with a 12 inch twisted pair of number 16 AWG copper wire, terminated with a 47µF capacitor of proper polarity and voltage rating.
3. Total regulation is defined as the static output regulation at 25°C, including initial tolerance, line voltage within stated limit, load current within stated limit, and output voltage adjusted to their factory settings. To achieve specified regulation on multiple output models, minimum loads are required on V(A) and V(B) as outlined in above table.
4. To maintain user-system safety approvals, the input power cable must be appropriately rated and approved.
5. Main output voltage is protected by a Zener diode.
6. Three orthogonal axes, random vibration 10 minutes for each axes, 2.4G rms 5Hz to 500Hz.
7. CAUTION: Allow a minimum of 5 seconds after disconnecting line power when making thermal measurements.
8. This product is only for inclusion by professional installers within other equipment and must not be operated as a stand alone product.

| OUTPUT PIN CONNECTIONS | | | |
|---|---|---|---|
| J2 | SINGLE | DUAL | TRIPLE |
| Pin 1 | V (A) | No Connection | V (C) |
| Pin 2 | Return | Return | Return |
| Pin 3 | V (A) | V (A) | V (A) |
| Pin 4 | Return | Return | Return |
| Pin 5 | V (A) | V (B) | V (B) |

| INPUT PIN CONNECTIONS J1 | |
|---|---|
| Pin 1 | AC Ground |
| Pin 3 | AC Line |
| Pin 5 | AC Neutral |




**Input and output connectors**

**AC (J1) connector type**
Molex 22-23-2051 or equivalent.

**DC (J2) connector type**
Molex 22-23-2051 or equivalent.

**Mating connectors**

**AC (J1) mating connector type**
Molex 22-01-2057 with Molex 08-52-0123 crimp terminals or equivalent.

**DC (J2) mating connector type**
Molex 22-01-2057 with Molex 08-52-0123 crimp terminals or equivalent.

**International Safety Standard Approvals**

VDE0805/EN60950/IEC950 File No. 10401-3336-0118

UL1950 File No. E136005

CSA C22.2 No. 950 File No. LR41062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